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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/586,603 | 07/20/2006 | Appukuttan Nair Sreekumaran | P-8924-US | 5956 |
| 49443 | 7590 | 12/22/2010 | | |
| Pearl Cohen Zedek Latzer, LLP 1500 Broadway 12th Floor New York, NY 10036 | | | EXAMINER SAVAGE, MATTHEW O | |
| | | | ART UNIT 1776 | PAPER NUMBER |
| | | | NOTIFICATION DATE 12/22/2010 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@pczlaw.com
Arch-USPTO@pczlaw.com

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/586,603 | Applicant(s) SREEKUMARAN ET AL. | |
| | Examiner Matthew O. Savage | Art Unit 1776 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 4, and 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the order in which steps a-f are carried out is unclear. Concerning steps e, it is unclear as to whether or not the silver and gold nanoparticles and the solution result from steps a-e. In addition, it is unclear as to how both silver and gold nanoparticles are produced if silver nitrate or gold chloride are not both supplied. Concerning steps e and f, it is unclear as to what operation "wet conditions" implies.

Concerning line 2 of claim 3, "the various forms" lacks antecedent basis. In addition, it is uncertain by "such as" as to whether or not the globules and powder forms are being positively claimed.

With respect to claims 4 and 9, it is unclear as to whether the gold or silver nanoparticles are loaded on activated alumina and/or activated magnesia as recited in claim 1.

Claims 1, 3, 4, and 7-9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action as follows.

1. (proposed amended) A method for the preparation of adsorbent compositions for removing pesticides like chlorpyrifos, malathion and other organo halogen/sulphur pesticides comprising metallic gold/silver nanoparticles having a size which is up to 150 nm deposited on activated alumina and/or magnesia, wherein said metallic gold/silver nanoparticles are prepared by:

- (a) diluting silver nitrate or $\text{HAuCl}_4 \cdot 3\text{H}_2\text{O}$ in water to form a solution;
 - (b) heating the solution from step (a);
 - (c) adding a sodium citrate solution to the solution from step (b);
 - (d) heating the solution from step (c) to produce a solution containing silver or gold nanoparticles;
 - (e) ~~loading silver and gold nanoparticles on~~ soaking activated alumina and/or activated magnesia ~~from a~~ in the solution from step (d) to produce activated alumina and/or activated magnesia loaded with gold or silver nanoparticles under wet conditions;
- and
- (f) washing the loaded activated alumina and/or activated magnesia from step (e) ~~under wet conditions~~ with distilled water.

3. (proposed amended) A method according to claim 1, wherein said activated alumina and/or magnesia are in ~~the various forms such as~~ globules and powder forms.

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4. (proposed amended) A method according to claim 1, wherein the ~~metallic silver and gold nanoparticles~~ loaded activated alumina and/or activated magnesia particles from step (f) are baked with activated carbon.

Cancel claims 5 and 6.

9. (proposed amended) The method of claim 4, wherein the ~~metallic silver and gold nanoparticles~~ loaded activated alumina and/or activated magnesia particles from step (f) are baked with activated carbon at 120 °C.

Yan and Turkevich et al are considered the closest prior art, however, the references fail to teach or suggest the process of forming a solution of gold or silver nanoparticles as set forth in steps a-d, soaking activated alumina and/or activated magnesia in the solution of gold or silver nanoparticles to produce activated alumina and/or activated magnesia loaded with gold or silver nanoparticles as recited in step e, and washing the loaded activated alumina and/or activated magnesia with distilled water as recited in step f as recited in proposed amended claim 1.

Applicant's comments concerning the Yan and Turkevich et al references are noted and agreed with, however, the claims presented on 11-22-10 are considered indefinite for the reasons set forth above. It is suggested that applicant amend the claims as suggested above to place the application in condition for allowance. The

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above proposed amendment would be entered via examiner's amendment upon request by the applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew O Savage/
Primary Examiner
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